



BOROUGH OF JARROW.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH
FOR 1905,

BY

J. M. NICOLL, M.B., C.M., EDIN.

Jarrow-on-Tyne :

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1906.

*To the Chairman and Members of the Sanitary
Committee.*

GENTLEMEN,

I again have the honour of laying before you my Annual Report on the Health of the Borough.

As judged by our Mortality Statistics, this has been on the whole very satisfactory.


On only two previous occasions has our general death rate been lower, and on only one occasion has our zymotic rate been so low as it is this year.

I am, Gentlemen,

Your obedient servant,

J. M. NICOLL.

Jarrow, February 28th, 1906.



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HEALTH REPORT,

✻ 1905. ✻

Area of Borough.—1,064 acres.

Density of Population.—32·5 per acre.

There were 24 self-contained and 10 tenemented houses of two flats each built during the year in the Borough.

VITAL STATISTICS.

Population.—The population is estimated at 34,600, being the same as that of last year. Owing to the depressed trade conditions prevailing, as shown by the large number of empty houses in the Borough, one hardly feels justified in reckoning on any increase of population during the year.

For the various Wards the population is estimated as follows :—North, 5,020 ; South, 6,930 ; East, 5,100 ; West, 6,050 ; Central, 5,860 ; Grange, 5,640.

Births.—There were 1,131 births registered during the year, representing a birth rate of 32·6, as compared with 1,087 last year, giving a birth rate of 31·4. For the previous 10 years the average number of births has been 1,162, while the average rate for the same period is 33·9.

The rate for the year for the Administrative County of Durham is 34.4, being 1.2 lower than that of the previous year. For England and Wales the rate is 27.2, being .7 lower than last year, and the lowest yet recorded rate. For the 76 great towns the rate is 28.2, and for the 141 smaller towns 26.9.

Of the 1,131 births, 573 were males, and 558 females. Thirty-five were registered as illegitimate, being equal to 3.0 per cent., as compared to 2.3 per cent. last year.

The following table shows the average birth rates during the last three-and-a-half decades :—

Birth Rates (Jarrow) per 1,000 of the estimated population.

Mean, 1871-80	...	...	...	45.2
,, 1881-90	...	...	...	40.3
,, 1891-1900	...	...	...	34.7
1901	...	...	...	34.1
1902	...	...	...	36.0
1903	...	...	...	34.7
1904	...	...	...	31.4
1905	...	...	...	32.6
Mean, 1901-1905	...	...	...	33.7

The comparison of the rate for the five years 1901-95, as compared with that for the decade 1871-80 is very noteworthy.

Deaths.—Including the deaths which occurred at Primrose Hill Hospital and the Floating Hospital, Jarrow Slake, there were 536 deaths registered as having occurred in the Borough. There were 58 deaths registered of residents whose deaths occurred in institutions outside the Borough. These deaths occurred, 53 at Harton Workhouse, 4 at Sedgely Lunatic Asylum, and 1 at Hebburn Infirmary. Deducting the death of one non-resident, which occurred at the Floating Hospital, we have a total of 593 deaths, representing a death rate of 17.1 per 1,000 of the population, as compared with 18.6 last year and 17.7

the year previous. Only on two occasions has the death rate been lower, in 1894 and 1897, when it was respectively 16.4 and 16.8. For the previous ten years the average number of deaths has been 653, whilst the average death rate for the same period is 19.0.

There were altogether 65 deaths registered in public institutions, as compared with 68 last year. These deaths occurred, 53 at Harton Workhouse, 6 at Primrose Hill Hospital, 4 at Sedgfield Asylum, and 1 each at the Floating Hospital and Hebburn Infirmary. All of these institutions, with the exception of the Floating Hospital, are situated outside the Borough.

Of the 593 deaths, 327 were males and 266 females, a proportion of 1,229 males to 1,000 females.

The death rate for the Administrative County is 17.4, as compared with 18.3 last year. For England and Wales the rate is 15.2, for the great towns 15.7, and for the smaller towns 14.4.

In the following table the average death rate for the last 35 years is shown and contrasted :

Death Rates (Jarrow) per 1,000 of the estimated Population.

Mean, 1871-80	...	...	...	23.9
„ 1881-90	...	...	...	21.1
„ 1881-1900	...	...	...	19.4
1901	...	...	...	19.1
1902	...	...	...	19.7
1903	...	...	...	17.7
1904	...	...	...	18.6
1905	...	..	...	17.1
Mean, 1901-1905	...	...	...	18.4

Coroners' Inquests were held in 23 instances, equal to 3.8 per cent. of the total deaths, as compared with 4.7 per cent. last year.

There were 35 uncertified deaths, as compared with 26 last year, and 25 the year previous.

The Natural Increase of the population, or the number of births in excess of deaths is 538, as compared with 441 last year, and 587 the year previous.

The following are the quarterly death rates during the year :—

**Quarterly Death Rates per 1,000 of the Population
(Jarrow).**

	Total Death- rate.	Zymotic Death- rate	Phthisis Death- rate.	Disease of Respiratory System excluding Phthisis Death-rate.	Infantile Mortality Rate.
First Quarter	20.34	1.04	1.50	6.47	151
Second Quarter	14.68	1.50	0.80	3.81	108
Third Quarter	15.49	3.00	1.96	1.15	145
Fourth Quarter	18.03	0.69	0.80	5.20	169
Year	17.13	1.55	1.26	4.15	143

It will be observed that the general death rate was highest in the first and last quarters of the year, and lowest in the second quarter. The increased death rate of these two quarters was largely due to inflammatory lung disease, deaths from disease of the respiratory system, excluding phthisis, causing a mortality of no less than 6.4 per 1,000 in the first quarter of the year, and 5.2 in the last quarter. The zymotic death rate varied from .6 in the last quarter, to 3.0 in the third, the high mortality of this quarter being almost entirely due to diarrhoea. The death rate from phthisis varied from .8 in the second and fourth quarters, to 1.9 in the third quarter of the year. The infantile mortality rate was lowest—108—in the second quarter, and highest—169—in the last quarter.

Infantile Mortality.—Of infants under one year of age, there were 162 deaths registered, equal to 27.3 per cent. of the total deaths, as compared with 168 deaths last year, equal to a per centage of 26.0. For the previous ten years the average number of deaths under one year of age is 184. Of children under five years of age, there were 243 deaths registered, equal to 40.9

per cent., as compared with 44.7 per cent. last year, and 42.9 per cent. the year previous

The Infantile Mortality Rate, or the number of deaths under one year to every 1,000 registered births is 143, as compared with 154 for the last two years. The average *rate* for the previous ten years is 158.

The rate during the year for the County is 159, for England and Wales 128, for the great towns 140, and for the smaller towns 132.

In the following table the average infantile mortality rates for the last three and a-half decades are shown and compared:—

Infantile Mortality Rates, Jarrow.

Mean, 1871-80	...	...	...	175
„ 1881-90	...	...	...	152
„ 1891-1900	...	...	...	158
1901	...	...	...	158
1902	...	...	...	145
1903	...	...	...	154
1904	...	...	...	154
1905	...	...	...	143
Mean, 1901-1905	...	...	...	150

It will be seen that the rate, though falling from 175 in the decade 1871-81, to 152 in the following decade, yet in the decade 91-1900 it again rose to 158, and that for the last 5-year period it is still 150.

This rate has remained persistently high throughout the country, and has not fallen in the same ratio as the other death rates, rather the reverse. Owing to this fact, and to help to elucidate as far as possible the cause of this persistence, the Local Government Board have this year asked for much more detailed information as to the causes of death in infants under one year, and Table V in the Appendix is well worth perusing. In it almost all the causes of death are shown in detail, and in ages varying from one week to one year.

I have for several years tabulated the chief causes of death in infants under one year of age, and in the following table this is again shown :—

**Causes of Death in Infants under One year of age
(Jarrow) 1905.**

Diarrhoea ...	...	...	...	16
Whooping Cough ...	...	...	...	3
Measles ...	...	...	...	2
				—21
Premature Birth ..	...	...	...	24
Congenital Debility	...	...	...	25
Pneumonia	...	...	...	24
Bronchitis	..	...	...	11
Convulsions	...	...	...	13
Marasmus	...	...	...	7
Tubercular Disease .	...	...	...	4
All other Causes	...	...	...	33
				—141
				<hr/> 162

As compared with last year there are 12 less deaths from zymotic disease, but six more from other causes.

It might be again pointed out the large proportion of deaths due to Premature Birth and Congenital Debility, no less than 30 per cent. of the total infantile deaths being due to these causes. If to these we add the deaths occurring from Pneumonia and Bronchitis, which constitute 21 per cent., we have no less than 51 per cent., or more than half, arising from causes over which a Sanitary Authority has not much control. As to what these causes are, I am much of opinion that as regards premature birth and congenital debility, early and immature marriages have a good deal to account for in this respect. The first children of these marriages may be fairly healthy and strong, but very soon the mothers get run down and debilitated, with the result that the later children are either born prematurely or born in a very weakly and debilitated condition. That alcoholism and certain

other diseases also contribute very largely to this mortality is a fact well-known to every medical practitioner. With regard to Pneumonia and Bronchitis, I am afraid that carelessness and thoughtlessness, and too often utter callousness and neglect on the parents' part, is accountable for a very large proportion of this mortality.

The Circular relative to the feeding of infants, drawn up by Dr. Hill, of the Durham County Council, is still being issued to each parent or guardian who registers the birth of a child. I am, however, much afraid that the people for whom it was intended hardly ever take the trouble of looking at it.

In the following table the death rates occurring in the various Wards are shown and contrasted. There is also shown this year for the first time the birth rate and infantile mortality rate occurring in the Wards. All deaths of residents occurring outside the Borough are included in this table, and are considered as having occurred in the Wards in which the patients resided previous to removal.

Births and Deaths, with respective Rates, according to Wards (Jarrow) 1905.

Ward.	Estimated Population.	Births and Birth-rate.	Total Deaths and Death-rate.	Zymotic Deaths and Death-rate.	Phthisis Deaths and Death-rate.	Deaths from Disease of the Respiratory System, excluding Phthisis, & Death-rate.	Deaths of Infants under One Year with Percentage Mortality.	Infantile Mortality rate.
North	5020	181 36.0	117 23.3	9 1.7	7 1.3	29 5.7	37 31.6	204
South	6930	267 38.5	118 17.0	9 1.2	12 1.7	35 5.1	41 34.7	153
East	5100	176 34.5	88 17.2	7 1.3	6 1.1	27 5.2	23 26.1	130
West	6050	196 32.3	108 17.8	14 2.3	9 1.4	21 3.4	24 22.2	122
Grange	5640	120 21.2	58 10.2	6 1.0	2 .3	10 1.7	16 27.5	133
Central	5860	191 32.5	104 17.7	9 1.5	8 1.3	22 3.7	21 20.1	109

The following table gives a very fairly accurate representation of the health conditions prevailing in the various Wards of the Borough.

The Birth Rate, it will be observed, varies from 21.2 per 1,000 of the population in the Grange Ward, to 38.5 in the South Ward. Dealing with the **General Death Rate**, it will be noticed that, that in the Grange Ward is the lowest, 10.2 whilst in the North Ward the rate is as high as 23.3. Next to the Grange is the South with 17.0, East 17.2, Central 17.7, and West 17.8. Last year the rate in the North Ward was 25.4, and that of the Grange Ward 12.2. As regards the **Zymotic Death Rate**, the difference in the various Wards is not so marked. The Grange Ward is again the lowest with a rate of 1.0, and the highest is the West with a rate of 2.3. The rate in the other Wards varies from 1.2 in the South, to 1.7 in the North. The **Death Rate from Phthisis** varies from .3 in the Grange, to 1.7 in the South Ward. Of **Diseases of the Respiratory System, excluding Phthisis**, the rate varies from 1.7 in the Grange, to 5.7 in the North Ward; the rates in the South and East Wards being respectively 5.1 and 5.2. Of **Deaths of Infants under one year**, it has been shown that these constitute a mortality of **27.3 per cent. for the Borough**. Comparing this with that which occurs in the various Wards, it will be noticed that the per centage mortality is lowest in the Central Ward, where it stands at 20.1 per cent., and highest in the South, where it is 34.7 per cent. Next lowest to the Central is the West Ward, followed by the East, Grange, and North. As regards the **Infantile Mortality Rate**, which for the Borough is 143, the lowest is again in the Central Ward, 109—whilst the highest is in the North, 204. Next to the Central is the West, followed by the East, Grange, and South.

Taking the average death rates occurring in each Ward, the North must again be adjudged the most unsatisfactory, followed this year by the West. The position occupied by the Central Ward, is again, from a health point of view, very satisfactory and

has greatly improved within the last five years. In 1901 it had the highest death rate of any Ward in the Borough, 27·7, in 1902 the rate fell to 22·6, and in 1903 to 18·6, in 1904 it was 19·4, and this year is 17·7, so that the improvement has been continuous and marked.

The following table contrasts the principal fatal diseases for the last three years :

FATAL DISEASES, 1903-5.

DEATHS.	1903	1904	1905
All Causes	613	616	593
The Seven Principal Zymotic Diseases ..	54	111	54
Smallpox	2	2	1
Measles ... ..	...	60	11
Scarlet Fever	6	...	1
Diphtheria, including Membranous			
Croup	7	5	4
Whooping Cough	12	17	10
“ Fever ”	3	4	5
Diarrhoea	24	26	22
Septic Diseases	11	17	10
Phthisis	53	34	44
Bronchitis, Pneumonia, &c.	118	127	144
Heart Disease	42	53	47
Injuries	27	21	17
All Other Causes	308	280	277

Referring briefly to the fatal diseases during the year the Zymotic will be treated of elsewhere- the disease causing the heaviest mortality was *Pneumonia*, which was responsible for 98 deaths, or nearly one-sixth of the total deaths. Fifty-five of these deaths were in children under five years and 34 in persons over 60 years of age. The Ward mortality was South 22, East 20, North 17, West 17, Central 15, Grange 7. Next to *Pneumonia* is *Heart Disease* responsible for 47 deaths, five of which were under 25 years of age. The Ward mortality was North 11, Central 11, West 10, South 8, East 5, Grange 2. *Phthisis* caused 44 deaths, equal to a death rate of 1·2 per 1,000 of the population, as compared with '9 last year. Of *tubercular disease other than Phthisis* there were 17 deaths, equal to a death rate of '4 as compared with

'6 last year. The Phthisis death rate for the County is 1.0, and for tubercular disease not Phthisis .7.

Twenty-seven of the Phthisis deaths were in persons between 25 and 65 years of age. The Ward mortality was South 12, West 9, Central 8, North 7, East 6, Grange 2.

Phthisis was made voluntarily notifiable in 1901. During the year only 15 cases were notified. All cases notified are visited by the sanitary authorities, unless advised otherwise by the medical attendant. Leaflets are left pointing out the dangers of the disease and the best means to be adopted for obviating these dangers. They also contain detailed instructions both for patient and attendants. The following leaflet is also issued by the Registrar to each person registering a death from Phthisis :—

1.—Consumption is an **Infectious Disease** and is easily communicated from one person to another.

2.—It is usually communicated by the expectoration or spit which is coughed up by one suffering from the disease. This spit when moist is practically harmless, but when it dries and is allowed to remain on clothes, walls, or floors, it is carried in the air as fine dust which if inhaled or breathed, may set up the disease in others. It is thus of the utmost importance that means should be taken—if this has not already been done—to at once destroy this expectoration or spit.

3.—Any clothing or bedding soiled with this spit, should be at once removed and if possible boiled. If this can not be done, as in dealing with carpets, curtains, mattresses, &c., these will be on request disinfected by the Corporation. Handkerchiefs, towels, blankets, etc., ought to be well boiled, and the floors, walls, and ceilings well washed with disinfectant, which is provided by the Corporation free of charge.

4.—A house occupied by a consumptive patient should not be occupied by any other person until it has been properly disinfected. **In case of death from Consumption or Phthisis, the house, &c., will on request be disinfected by the Sanitary Authority**

It is noteworthy that so far there has not been a single request for disinfection of any sort.

In 1902 when dealing with this disease I expressed the opinion that we had not yet reached the stage when it should be made compulsory notifiable. I am now inclined to modify that opinion, and believe that the compulsory notification would result in benefit,

if only by bringing the dangers of the disease under the notice of those suffering from it, and of those having to live in contact with such cases. Voluntary notification, which was adopted mainly with this object, cannot so far be looked upon as having realised its object in a manner at all satisfactory. There were five patients sent to Stanhope Sanatorium during the year.

There were 30 deaths from *Bronchitis*, eleven of which were in infants under one year.

These deaths occurred 9 each in the North and South Wards, 5 in the East, 3 in the Grange, and 2 each in the West and Central. There were 25 deaths from *Cancer*, which occurred 6 in the Central Ward, 5 each in the North and South, 4 in the West, 3 in the East, and 2 in the Grange. For further information under this heading see Table IV. of Appendix.

ZYMOTIC DISEASE.

Infectious Diseases Notification Act.—There were 199 cases of Infectious Diseases brought under the notice of the Health Office during the year, as compared with 295 last year, and 307 the year previous. As compared with last year, there are 36 cases less of Smallpox, 12 of Scarlet Fever, 4 of Membranous Croup, and 1 of Continued Fever, whilst there are 16 more of Enteric Fever, 7 of Diphtheria, 2 of Erysipelas, and 1 of Phthisis. See Table VI. for further details.

From the Seven Principal Zymotic Diseases there were 54 deaths registered, representing a zymotic death rate of 1.5 per 1,000 per annum as compared with 11.4 last year, giving a death rate of 3.2. Only on one occasion—1903—has our zymotic rate been so low.

The rate for the County is 2.37, that for England and Wales being 1.5, for the Great Towns 1.8, and for the Smaller Towns 1.5.

These deaths were due 22 to Diarrhoea, 11 to Measles, 10 to Whooping Cough, 5 to Enteric Fever, 4 to Diphtheria, and Membranous Croup, and 1 each to Scarlet Fever and Smallpox.

Zymotic Diseases—Deaths from and the Months in which they occurred., 1905—Jarrow.

Month	Diarrhoea.	Measles.	Whooping Cough.	Enteric " Fever."	Diphtheria including Membranous Croup.	Scarlet Fever.	Smallpox.	Total
Jan.	...	8	...	...	...	..	1	9
Feb.	...	...	...	...	...	...	..	..
March	...	...	...	...	...	...	..	..
April	1	...	1	...	2	...	..	4
May	1	1	1	...	...	..	..	3
June	...	2	1	1	2	..	...	6
July	...	...	...	..	...	1	..	1
August	11	...	3	1	...	..	...	15
Sept.	7	...	3	...	..	..	..	10
October	1	...	1	1	..	..	..	3
Nov.	1	...	...	2	..	...	..	3
Dec.	..	...	...	...	...	..	...	...
Year	22	11	10	5	4	1	1	54

There were no deaths from Zymotic disease in February, March, or December. The highest mortality occurred during the months of August, September, and January, the deaths in August and September being chiefly due to Diarrhoea, and those in January to Measles.

In the following table the Zymotic Mortality occurring in the various Wards is shown.

Zymotic Deaths ; showing Wards in which they occurred.

Diseases.	North Ward	South Ward	East Ward.	West Ward.	Grange Ward.	Central Ward.	Total.
Diarrhoea ..	3	7	6	2	..	4	22
Measles ...	1	2	...	4	1	3	11
Whooping Cough ...	2	...	..	5	3	...	10
Enteric Fever ...	2	...	1	...	..	2	5
Diphtheria & Membranous Croup ...	1	..	..	2	1	...	4
Scarlet Fever ..	..	..	..	1	...	..	1
Smallpox ..	..	...	...	...	1	..	1
Total ...	9	9	7	14	6	9	54

It will be seen that Measles and Whooping Cough were fatally present in the West Ward, whilst Diarrhoea was the chief cause of the Zymotic mortality in the South and East Wards.

Smallpox.—Thirteen cases came under observation during the year, as compared with 49 last year. For over two years Smallpox has been more or less prevalent, and though at no time approaching the epidemic form, it was so constantly present as to be always a source of anxiety. The first cases occurred in 1902, when after a lapse of six years, 3 cases came under observation; next year we had 17 cases, and last year 49. Considering its very great prevalence during that period, and its very serious epidemic form in some of the Towns, almost in the immediate vicinity, we may congratulate ourselves on having escaped so easily.

Dealing with the cases that occurred during the year, the first case—on January 9—from Frederick Street, was a contact, from a patient who had been removed to Hospital from the same house on December 28. On January 15 a case was notified from Salem Street, and on January 25 one in Cambrian Street, on Feb. 28 one from Humbert Street. These were all fresh centres, with no connection whatever between, and in none of them were there any further developments. There were no more cases until April 11, when a case was notified at Elm Street; on April 13 one at York Street, on April 14 another case from Elm Street, and one from Spencer Street, and on the 17th another case at Elm Street. All these cases had evidently been infected from the same source, the next notification was on May 24, from High Street. On examining the inmates of the house, another and earlier case was discovered. From this centre we had another contact case on June 3, also from High Street. On June 7 a case was reported from Croft Terrace, a contact from a case at Pelaw, this being the last for the year. The Ward distribution of the cases was: Grange 5, South 4, Central 3, North 1.

The death rate is '02, that for the County being '002.

The measures adopted to check the spread of the disease were as follows :—

1.—Complete and prompt isolation of the cases, all of them being removed to Hospital immediately they were notified.

2.—Vaccination and re-vaccination of all contacts, where this was thought necessary, and so far as they consented to the operation.

3.—Most complete and thorough disinfection of everything in any way connected with the case. Clothes, bedding, carpets, &c., were taken and put through the disinfector. Floors, walls, &c., were washed with Local Government Board Disinfectant, and the room or rooms fumigated with formalin. This was most rigorously carried out after each case which occurred.

4.—All contacts were kept under observation for 18 days. Only in very exceptional circumstances was it thought necessary to enforce complete quarantine.

5.—The houses in the immediate vicinity were visited, and all suspicious cases noted and observed.

6.—Notice was sent to the Vaccination Officer, with the object of tracing any unvaccinated children, there might be in the neighbourhood. Posters were also issued pointing out the early symptoms of the disease, and warning the people against visiting patients in whom any suspicion of the disease existed. The benefits of vaccination and re-vaccination were also pointed out, Cleanliness of persons and surroundings was also insisted upon.

Scarlet Fever.—There were 67 cases notified, as compared with 79 last year, this being the lowest number in any year since 1890. The monthly notifications were as follows :—January 4, February 10, March 7, April 6, May 3, June 1, July 3, August 8, September 6, October 12, November 6, December 1. Showing that one-third of all the cases occurred during the months of February and October.

The Ward distribution was as follows :—South 30 Grange 21, North 6, East and West 5 each, Central nil, showing again the

marked incidence of the disease on the South and Grange Wards.

There was one death, the death rate per 1,000 of the population being '02, as compared with a nil rate last year. The rate for the County is '09.

There were 46 cases removed to Hospital, equal to 67 per cent. of the total. Last year 47 cases were treated in Hospital.

Enteric Fever.—There were 34 cases notified, as compared with 18 last year. The monthly notifications were as follows :—January 1, June 9, July 2, August 3, Sept. 2, October 7, November 6, Dec. 4, so that for the first five months of the year the town was practically free from the disease. In June there was a sudden and sharp outbreak, and from that date onwards cases kept cropping up until the end of the year. The Ward distribution was as follows—Central 10, North 6, South 6, West 5, East 1, Grange 3, showing it occurring more or less all over the Borough.

As to the cause of the outbreak it is very difficult to speak definitely. The milk supplies were carefully watched, but it was clearly shown that they had nothing to do with it, neither could the water supply be in any way associated with it. Except for one group of cases there was nothing to lead one to connect the disease with any insanitary conditions of house or surroundings. In this group, from which we had four cases, the dirty and filthy condition of the house and the people was undoubtedly the means of spreading the disease. At one time shell-fish, generally mussels, were thought to have had something to do with the outbreak, and in at least 70 per cent. of the cases this form of food was found to have been partaken of at a period corresponding to the incubation of the disease. How far, however, this was the real cause is exceedingly doubtful, as at the same time the disease was very prevalent in very many of the surrounding districts, and more or less over the country generally, pointing largely to the influence of general climatic conditions. The probability is that we have an infected soil—Enteric until four years ago being very prevalent in the Borough—and the climatic conditions being favourable to the germ, an outbreak results.

There were 28 cases admitted to the Hospital,

Continued Fever.—There were five cases as compared with six last year. The cases were notified 2 in October and 1 each in February, July, and November, and occurred 2 each in the North and East Wards and 1 in the West.

There was one case admitted to the Hospital.

“Fever.”—Under this head is included the deaths occurring from Enteric, Continued, and Relapsing Fevers. There were five deaths, all from Enteric Fever, the “Fever” death rate being $\cdot 14$, as compared with $\cdot 11$ last year. The “Fever” rate for the County is $\cdot 20$.

Diphtheria, including Membranous Croup.—There were 22 cases notified, 17 of Diphtheria and 5 of Membranous Croup, as compared with 19 last year, being 10 of Diphtheria and 9 of Membranous Croup. The cases occurred 3 in January, 1 in February, 1 in March, 4 in April, 1 in May, 2 in June, 2 in July, 1 in October, 3 in November, and 4 in December. There were no cases notified during August or September. The Ward distribution was as follows—South 5, Grange 4, Central 4, North, East, and West, 3 each. Six were in children between 1 and 5 years, eleven between 5 and 15, four between 15 and 25 years, and one over 25 years of age.

There were 4 deaths, representing a death rate of $\cdot 11$ as compared with $\cdot 14$ last year. The rate for the County is $\cdot 25$.

Diarrhoea.—There were 22 deaths returned as due to Diarrhoeal compared with 26 last year. Sixteen of these deaths were in infants under 1 year, and six in children between 1 and 5 years. The Ward mortality was South 7, East 6, Central 4, North 3, West 2, Grange nil. Eighteen of the deaths occurred in August and September.

The death rate is $\cdot 63$, that for the County being $\cdot 90$.

Whooping Cough.—This disease in a mild form was more or less present in the Borough during the whole year. There were 10 deaths which occurred 1 each in the months of April, May, June, and October, and three each in August and September. The Ward mortality was West 5, Grange 3, North 2, showing that the disease was most prevalent in these Wards. Last year this condition was reversed,

there being no deaths in the West and Grange Wards, whilst the highest mortality was in the Central.

The death rate is '28, that for the County being '42.

Measles.—There were 11 deaths as compared with 60 last year. Eight of the deaths occurred in January, being the last of the very severe epidemic of the previous year. The other three deaths occurred 1 in June and 2 in July. The Ward mortality was as follows—West 4, Central 3, South 2, Grange and North 1 each, East nil. Two of the deaths were in infants under 1 year, whilst eight were in children between 1 and 5 years.

The death rate is '31 as compared with 1'7 last year. The rate for the County is '48.

Mumps.—Owing to the severe outbreak of this disease the Grange Girls' School was closed from Nov. 28th to Dec. 8th inclusive.

GENERAL SANITARY WORK.

As will be seen from Mr Batey's Report, this has been varied and extensive, 1,027 notices having been served for breaches of the Public Health Acts. A very large part of this is in connection with the oldest property in the Borough, which, following the usual laws of nature, tends to fall into decay, this decay being however in a very large number of instances hastened by the habits and destructive tendencies of the occupants.

Insanitary Conditions of Property.—For foul conditions and structural defects, 16 notices were served, all of which were remedied. With regard to House Drainage, no less than 316 notices were served for defective conditions. These also were all attended to.

Ashpit Privies.—It is satisfactory to note that only 106 of these remain in the Borough, 77 having been removed and earth closets substituted. The worst of these have now disappeared, but until such time as they have *all* gone, the state of the town as regards

sanitary conveniences cannot be considered satisfactory. To these owners who have not yet seen their way clear to remove them, I need say nothing further than the warning given last year, unless it is to point out that at the present day, common decency requires the removal of such filthy so-called conveniences.

Removal of Refuse Excrement. This has been done in a very satisfactory manner, both as regards expedition and cleanliness, with the result that very few complaints have been received. The ash closets are emptied once a week, and the ashpit privies once a month, the refuse being sent to the sea.

Scavenging.—This work also has been very well done during the year. I have pointed out in previous Reports how in some of our back streets, their rough and uneven condition made scavenging very difficult, and not at all satisfactory. Now that the Authority has commenced to macadamise some of these, it is to be hoped they will continue the work, as there are a large number in which this could be done with very great advantage from a health point of view.

Defective Yard Paving.—Thirty-six were dealt with during the year and all cemented.

Bake Houses.—There are six in the Borough, which have all been inspected and found in order

PROCEEDINGS BEFORE MAGISTRATES.

Two persons were proceeded against, one for defective ashpit privy, and the other for a defective house drain. In both instances orders were made for the work to be done and costs paid.

Proceedings were also taken in connection with smoke nuisance. Here also an order was made to abate the nuisance, and costs were allowed.

Twelve persons were summoned under our Bye-Laws for the prevention of nuisances, and fined 5/- each.

POLLUTION OF RIVER DON.

Nothing has been done in this connection since my last report.

WATER SUPPLY.

This is obtained from wells sunk in magnesian limestone. The supply is constant and always ample.

FACTORY AND WORKSHOPS' ACT, 1901.

There are 39 workshops on the Register as compared with 30 last year. These have all been inspected and are visited occasionally. In two instances it was necessary to give notice to remedy defective sanitary accommodation. Both notices were immediately attended to.

For actions under Food and Drugs' Act ; for Precautions against Infectious Diseases ; for Inspection of Lodging Houses, Dairies, Cow-sheds, Slaughter Houses, etc., see Inspector's Report.

**TABLE 1.—Vital Statistics of whole District
during 1905 and previous years.**

Year.	Population estimated to Middle of each Year.	Births.		Deaths under One Year of Age.		Deaths at all Ages Total.		Deaths in Public Institutions.	Deaths of Non- residents registered in District.	Deaths of Residents registered beyond District.	Deaths at all Ages. Nett.	
		No.	Rate.*	No.	Rate per 1,000 Births registered.	No.	Rate.*				No.	Rate.*
1	2	3	4	5	6	7	8	9	10	11	12	13
1895	33923	1110	32.7	161	118	618	18.2	4	6	16	658	19.3
1896	33985	1058	31.1	190	179	644	18.0	12	4	33	643	18.9
1897	34047	1192	35.0	175	146	550	16.1	8	11	35	574	16.8
1898	34109	1183	34.6	207	174	615	18.0	16	10	59	664	19.4
18 9	34169	1202	35.1	203	168	676	19.7	14	12	38	702	20.5
1900	34227	1185	34.6	189	159	645	18.8	15	2	49	692	20.2
1901	34310	1170	34.1	185	158	612	17.8	12	1	17	658	19.1
1902	34400	1241	36.0	181	145	648	18.8	15	4	36	680	19.7
1903	34500	1200	34.7	185	154	570	16.5	12	2	45	613	17.7
1904	34600	1087	31.4	168	154	595	17.1	12	5	56	646	18.6
Averages for years 1895-1904.	34227	1162	33.9	181	158	611	17.9	12	5	44	653	19.0
1905	34600	1131	32.6	162	143	550	15.3	1	1	61	593	17.1

* Rates calculated per 1 000 of estimated population.

Area of District in acres }
(exclusive of area } 906.
covered by water).

Total Population at all ages, 34,294.	} At Census of 1901.
Number of inhabited houses, 4,355.....	
Average number of persons per house, 5.03	

TABLE II.—Vital Statistics of separate Localities in 1905 and previous years

Names of Localities.	North Ward.				South Ward.				East Ward.				West Ward.				Central Ward.				Grange Ward.				The Borough.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all Ages.	Deaths under 1 year.
1895	5376	not given by Registrar.	156	44	5876	not given by Registrar.	74	21	5306	not given by Registrar.	104	22	5960	106	32	32	6333	142	29	29	5152	49	16	33923	658	164	164	
1896	5224	not given by Registrar.	135	35	6014	not given by Registrar.	76	27	5276	not given by Registrar.	124	35	5967	110	37	37	6282	130	35	35	5122	60	17	33985	643	190	190	
1897	5272	not given by Registrar.	194	27	6152	not given by Registrar.	76	23	5246	not given by Registrar.	111	43	5974	99	22	22	6211	141	40	40	5152	53	15	34047	574	175	175	
1898	5220	not given by Registrar.	131	46	6250	not given by Registrar.	95	32	5216	not given by Registrar.	126	36	5981	103	35	35	6140	153	41	41	5262	56	16	34109	681	207	207	
1899	5110	not given by Registrar.	154	42	6428	not given by Registrar.	115	33	5186	not given by Registrar.	105	28	5988	113	22	22	6069	137	32	32	5332	75	26	34169	702	203	203	
1900	5110	not given by Registrar.	127	38	6566	not given by Registrar.	96	21	5156	not given by Registrar.	110	29	5995	118	27	27	5996	143	45	45	5404	98	29	34227	692	189	189	
1901	5056	not given by Registrar.	118	32	6710	not given by Registrar.	117	34	5120	not given by Registrar.	102	28	6006	101	33	33	5925	152	42	42	5483	81	16	34310	688	185	185	
1902	5020	not given by Registrar.	144	41	6841	not given by Registrar.	97	30	5100	not given by Registrar.	104	24	6020	121	42	42	5852	135	29	29	5558	78	15	34400	680	181	181	
1903	5020	not given by Registrar.	108	36	6880	not given by Registrar.	102	30	5100	not given by Registrar.	88	31	6030	126	41	41	5860	111	31	31	5600	78	16	34500	613	185	185	
1904	5020	not given by Registrar.	128	40	6930	not given by Registrar.	123	40	5100	not given by Registrar.	104	32	6050	108	25	25	5860	114	19	19	5640	69	14	34600	645	168	168	
Average of Years 1895 to 1904.	5158	not given by Registrar.	129	39	6469	not given by Registrar.	97	30	5181	not given by Registrar.	109	31	5997	110	31	31	6055	135	34	34	5564	70	18	34227	653	184	184	
1905	5020	not given by Registrar.	181	117	27	6930	not given by Registrar.	41	5100	176	88	23	6050	108	24	24	5880	191	104	21	5640	120	58	34600	1131	593	162	

TABLE III.—Cases of Infectious Diseases notified during the Year 1905.

Notifiable Disease.	Cases notified in Whole District.						Total Cases notified in each Locality.							No. of Cases of removed to Hospital from each Locality.							
	At all Ages.	At Ages—Years.					North Ward.	South Ward.	East Ward.	West Ward.	Orange Ward.	Central Ward.	Total.	North Ward.	South Ward.	East Ward.	West Ward.	Orange Ward.	Central Ward.	Total.	
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 65.															65 and upwards
Small-pox	13	...	...	...	4	9	1	4	...	...	5	3	...	1	4	...	...	...	3	...	13
Cholera	17	...	...	...	...	...	1	5	...	...	...	3	...	...	...	...	...	...	...	...	...
Diphtheria	5	...	2	10	4	1	2	...	...	...	4	...	...	...	...	...	...	...	...	...	...
Membranous Croup	43	1	4	1	...	...	10	12	1	4	11	5	...	...	...	...	...	...	...	...	...
Erysipelas	67	...	21	41	4	1	6	30	5	5	21	...	...	4	28	5	3	5	...	...	45
Scarlet fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric fever	34	...	1	5	7	21	6	6	4	5	3	10	...	5	5	3	3	3	9	...	28
Relapsing fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued fever	5	...	...	2	1	2	2	...	2	1	...	...	...	...	...	1	...	...	...	...	1
Puerperal fever .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Plague .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	15	...	...	...	8	6	3	1	1	2	5	...	...	...	...	...	...	...	...	...	...
Totals	199	1	32	63	31	69	31	61	16	20	49	22	...	10	37	9	6	13	12	...	87

Isolation Hospital—Primrose Hill Hospital situated a short distance outside Borough.

TABLE V.—Infantile Mortality during the Year 1905. Deaths from Stated Causes in Weeks and Months under One Year of Age.

CAUSE OF DEATH.		Under 1 Year.												Total Deaths under one Year.				
		Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	
All Causes.	Certified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	148
	Uncertified	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14
Common Infectious Diseases.	Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Chicken-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Scarlet Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diphtheria: Croup	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoeal Diseases.	Whooping Cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Diarrhoea, all forms	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhoeal Diseases.	Enteritis not Tuberculous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Gastritis, Gastro-intestinal Catarrh	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Wasting Diseases.	Premature Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Congenital Defects	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Injury at Birth	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Want of Breast Milk	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Diseases.	Atrophy, Debility, Marasmus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Tuberculous Meningitis: Tuberculus Peritonitis: Other Tuberculous Diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Diseases.	Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Syphilis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Rickets	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Meningitis not Tuberculous	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Convulsions	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tuberculous Diseases.	Bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Laryngitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Pneumonia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Suffocating, overlaying Other Causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
District or sub-division of Jarrow.		25	17	11	3	56	17	12	16	9	8	11	11	3	10	7	2	162

Births in the year { legitimate ... 1,096
 illegitimate... 35
 Deaths from all Causes at All Ages 593.

Population
 Estimated to middle of 1905,
 34,600

TABLE IV. Causes of, and Ages at, Death during Year 1905.

Causes of Death.	Deaths in whole District at subjoined Ages.							Deaths in Localities, (at all Ages).						Deaths in Public Institutions in District.	
	All ages.	Under 1.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upwards.	North Ward.	South Ward.	East Ward.	West Ward.	Orange Ward.	Central Ward.		Total.
Small-pox	1					1						1			
Measles	11	2	3	1				1	2		4	1	3		
Scarlet fever .. .	1			1							1				
Whooping-cough ..	10	3	7					2			5	3			
Diphtheria and membranous croup ..	4		2	2				1			2	1			
Croup	1		1								1				
Fever (Typhus .. .															
Enteric	5					5		2		1			2		
(Other continued ..															
Epidemic influenza ..	4	1				2	1	1	2				2		
Cholera															
Plague															
Diarrhoea	22	16	6					3	7	6	2		1		
Enteritis	1	1						1							
Puerperal Fever .. .															
Erysipelas	3		1			2		1				2			1
Other septic diseases ..	7				1	4	2		1		2	3	1		
Phthisis	14	1		8	8	27		7	12	6	9	2	8		
Other tubercular diseases ..	47	3	5	4	1	4		2	3	7	3		2		
Cancer, malignant diseases ..	25				1	18	6	5	5	3	4	2	6		
Bronchitis	30	11	1			11	7	9	9	5	2	3	2		
Pneumonia	98	24	31	6	3	30	4	17	22	20	17	7	15		
Pleurisy															
Other diseases of Respiratory organs ..	16	3			2	9	2	3	4	2	2		5		
Alcoholism															
Cirrhosis of liver ..	4					4			1	1	2				
Venereal diseases ..	4	3				1			1	1	1		1		
Premature birth .. .	24	24						2	9	1	4	3	5		
Diseases and accidents of parturition ..	7				2	5		3	1		2		1		
Heart Diseases .. .	47	2	1	1	1	30	12	11	8	5	10	2	11		
Accidents	17		2	2	2	7	4	5	2	3	2	2	3		
Suicides	2					1	1				1	1			
Rheumatic fever .. .	1					1			1						
Congenital Debility ..	15	25						9	3	1	3	3	3		
Convulsions	15	13	2					3	2	1	1	4	1		
Apoplexy, Hemiplegia and Cerebral Hemorrhage ..	41					17	4	8	2	4	5				
Marasmus	8		1					1	3	1	1		1		
Meningitis	7	2	1	1					3	3	3	1			
All other causes .. .	111	21	12	2	3	34	39	20	19	15	18	17	22		
All causes	593	162	84	31	24	213	82	117	118	88	103	58	104		1

TABLE VII. Notification of Cases of Infectious Disease, received at the
Health Office during 1905-

DISEASE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Smallpox ...	3	1	...	5	2	2	...	...	...	...	...	...	13
Scarlet Fever...	4	10	7	6	3	1	3	8	6	12	6	1	67
Enteric Fever..	1	...	...	...	...	9	2	3	2	7	6	4	34
Continued Fever	...	1	...	...	...	...	1	...	...	2	1	...	5
Diphtheria ...	1	1	1	3	1	1	2	...	...	1	3	3	17
Membranous Croep	2	...	...	1	...	1	...	...	...	...	...	1	5
Erysipelas ...	4	3	6	5	5	6	...	3	3	4	...	4	43
Phthisis ...	1	2	2	5	...	1	...	1	...	2	...	1	15
Total	16	18	16	25	11	21	8	15	11	28	16	14	199

ANNUAL REPORT OF THE MEDICAL OFFICER OF HEALTH FOR
1905, FOR THE BOROUGH OF JARROW.

**Factories, Workshops, Laundries, Workplaces,
and Homework.**

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of
Nuisances.

Premises.	Number of		
	Inspections	Written Notices.	Prosecutions
FACTORIES (Including Factory Laundries).	20	...	...
WORKSHOPS (Including Workshop Laundries)	58	...	...
Total	78	...	...

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied	Referred to H.M. Inspector.	
Nuisances under the Public Health Act.				
Other Nuisances	1	1	...	1
Sanitary Accommodations—				
Insufficient ... ..	...	...	...	...
Unsuitable or defective	2	2	...	...
Not separate for sexes ... ..	...	...	...	...
Total	3	3	...	1

3.—OTHER MATTERS.

Class.	Number.
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory and Workshop Act (s. 133) ... ..	...
Workshops on the Register (s. 131) at the end of 1905	
Bakehouses	6
Others	33
Total number of Workshops on Register	39

**Summary of Work done in the Inspector of Nuisances'
Department during the Year 1905, in the Urban
Sanitary District of Jarrow.**

I.—PUBLIC HEALTH ACTS.	No. of Informal Written Notices by Inspector.	No. of Formal Notices by order of Authority.	No. of Nuisances abated after Notice.	General Remarks.
Dwelling-houses and Schools—				<i>Bye-Laws for Prevention of Nuisances.</i> —Twelve persons were summoned for Breach of Bye Law 3, penalties of 5s each were imposed.
Foul Conditions	11	..	11	
Structural Defects	5	..	5	
Overcrowding	6	..	6	
Lodging-houses. To Limewash etc	60	..	60	<i>Public Health Act, 1875.</i> —Two persons were summoned for not complying with Formal Notices by order of the Authority; one defective ashpit and privy, one defective house drain. An order was made in each case to do the work and pay the costs of the Court.
Dairies and Milkshops, all kept under observation and found in order .. ..	..	..	..
Cowsheds To Limewash	4	..	4	
Bakehouses, six in number, all inspected and found in order .. ..	..	..	..
Slaughter-houses To Limewash	30	..	30	
Ashpits and Privies	77	4	77	90 Circular Letters were sent to the Owners of Houses with large Ashpits and Privies, and followed up by informal notices, thus there were 77 large ashpits removed, leaving in the town 106 ashpits; formerly there were 1,656
Deposits of Refuse and Manure	105	..	105	
Water Closets	4	..	4	
Defective Brick Yard Paving— all cemented	36	..	36	
House Drainage —				
Defective Traps	18	..	18	310 Verbal notices were given to Limewash through passages and staircases, etc., and were all complied with.
No disconnection from Sewers	5	..	5	
Other Faults	203	3	203	205 Verbal notices were given warning people against putting liquid offensive matter into box-closets running into back streets
Water Supply	18	..	18	
Pigsties .. ..	..	..	..	<i>Infectious Disease Notification Act.</i> 15 Certificates were received during the year. Each case was visited, and a copy of instructions drawn up by the M.O.H., as to disinfection and isolation, etc., was left at the house with the person in charge of the patient. If not removed to Hospital visits were made to the house during convalescence.
Animals Improperly Kept .. ..	..	..	..	88 persons were removed to Hospital.
Offensive Trades .. ..	..	..	..	All houses are disinfected after patients are removed to hospital, or termination of illness.
Smoke Nuisances	3	3	3	
Other Nuisances	350	..	350	
Totals	1025	10	1025	

II.—HOUSING OF THE WORKING CLASSES ACT, 1890.		No.	Remarks.
Formal Notices served .. .. .	...	
Dwellings dealt with .. .. .	...	
Dwellings made habitable after formal notice	...		
Closing Orders applied for .. .. .	...	
Closing Orders granted by Magistrates ..	...	
Dwellings permanently closed .. .. .	...	
III. FACTORY AND WORKSHOP ACT, 1901.			
Action taken, Notices taken, etc. .. .. .	...		<p>39 Workshops are registered and receive constant attention and are visited occasionally.</p> <p>Three notices were served to abate Smoke Nuisances, and by order of the Sanitary Authority the Company was summoned and an order was made to abate the nuisance, with costs.</p> <p>Two notices were served to remedy defective W.-closets. Both were carried out by fitting New Closets with an improved system.</p>
IV —WATER, FOODS AND DRUGS.			
Samples of Water taken for analysis .. .. .	...	
Samples of Water condemned as unfit for use	...		
Seizure of Unwholesome Food .. .. .	...	
Convictions for exposing or selling unwholesome Food .. .. .	...	
Samples of Food and Drugs taken for Analysis	43		All genuine
Samples of Food found Adulterated .. .. .	...	
V.—PRECAUTIONS AGAINST INFECTIOUS DISEASE.			
Lots of infectious bedding stored or destroyed	153		Lots of bedding and parcels of clothing, etc., were put through the disinfectant.
Houses disinfected after Infectious Disease...	227		
Schools do. do. do. ..	...	
Prosecutions for exposure of infected persons or things .. .. .	...	
Convictions for do. do. do. ..	...	

EDWARD BATEY, INSPECTOR OF NUISANCES

February 1906.